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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,606	01/22/2001	Kenneth K. Smith	10001436-1	2527

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EXAMINER	
HOFFMAN, BRANDON S	
ART UNIT	**PAPER NUMBER**
2136	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/767,606	SMITH, KENNETH K.	
	Examiner	Art Unit	
	Brandon Hoffman	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 are pending in this office action.

2. Applicant's arguments filed October 4, 2004, have been fully considered but they are not persuasive.

Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1-6, 9-13, and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nevis et al. (U.S. Patent No. 6,581,159).

Regarding claims 1, 9, and 16, Nevis et al. teaches in combination with a computer system having a special modifiable memory in which is loaded an original code set, a method for maintaining the integrity of the contents of that modifiable memory when the system attempts to overwrite the contents with a different code set ([A method for preventing malicious and defective overwrites of a basic input/output system (BIOS) code of a computer system where said BIOS code is stored in modifiable memory] or [A method for ensuring that only an accurate copy of an authorized correct code set containing data and/or instructions crucial to the proper functioning of a

computer system can be written to a modifiable memory of that computer]), said methods comprising the steps of:

- Providing a one-way algorithm which acts on a replacement code set and generates a security key unique to the replacement code set (col. 5, lines 10-15),
    - Said algorithm being maintained confidential by the provider of the replacement code set (col. 4, lines 63-67);
- Providing the security key in combination with distributions of the replacement code set (col. 5, lines 15-19);
- Providing a memory controller having an embedded copy of the algorithm (fig. 1, ref. num 125),
    - Said memory controller causing a tendered code set, which the computer system attempts to write into the modifiable memory, to be acted on by the embedded copy, thereby generating a local key (fig. 1, ref. num 130 and 140);
- Comparing the local key with the security key (col. 5, lines 15-22);
- Allowing the contents of the modifiable memory to be overwritten only if the local key matches the security key (col. 5, lines 22-37).

Regarding claim 2, Nevis et al. teaches wherein said original code set contains data and/or instructions crucial to the proper functioning of the computer system (col. 4, lines 57-60).

Regarding claims 3, 4, 10, 11, and 17, Nevis et al. teaches wherein the computer system also includes a microprocessor and a main memory, and wherein said tendered code is loaded into said main memory and said microprocessor executes said algorithm thereon, calculates a local key, compares the security key to the local key, and provides the results of the comparison to the memory controller (col. 5, line 66 through col. 6, line 7).

Regarding claims 5, 6, 12, 13, and 18, Nevis et al. teaches wherein said memory controller further includes an on-chip special-purpose processor and an on-chip non-modifiable memory for storing said algorithm, and access to said non-modifiable memory is limited to said special-purpose processor, and wherein said special-purpose processor loads said algorithm from said non-modifiable memory, calculates a local key for the different code, and compares the local key with the security key (col. 5, lines 4-10 and lines 19-27).

Claim Rejections - 35 USC § 103

5. Claims 7, 8, 14, 15, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nevis et al. (USPN '159).

Regarding claims 7, 8, 14, 15, 19, and 20, Nevis et al. teaches all the limitations of claims 1, 9, and 16, respectively, above. However, Nevis et al. does not specifically teach wherein said algorithm employs modular arithmetic or a cyclic redundancy check.

Nevis et al. does suggest a plethora of different algorithms that could be used (col. 3, lines 6-9). Nevis et al. is impartial to the exact algorithm for this invention.

It would have been obvious to use modular arithmetic or a cyclic redundancy check as the selected algorithm. It would have been obvious to use modular arithmetic or a cyclic redundancy check as the selected algorithm because the mere use of any one particular algorithm is exclusively dependent on the application, i.e., if space is of concern – as it is in the case of BIOS – a simpler algorithm should be used. If space were of no concern, a much more robust algorithm should be used to provide maximum protection against hacking.

Response to Arguments

6. Applicant provides a 37 C.F.R. 1.131 declaration claiming conception prior to the filing date of the cited prior art.

7. The declaration filed on October 4, 2004, under 37 CFR 1.131 has been considered but is ineffective to overcome the Nevis et al. (U.S. Patent No. 6,581,159) reference. Namely, the signature from the inventor is missing.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brandon Hoffman

BH

E. Moise

EMMANUEL L. MOISE
PRIMARY EXAMINER